

17224 U.S. PTO  
08/05/03

PTO/SB/05 (06-03)

Approved for use through 07/31/2003. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

## UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. ATX-007CP4DV13CN

First Inventor John J. Harrington

Title COMPOSITIONS AND METHODS FOR NON-TARGETED ACTIVATION OF ENDOGENOUS GENES

Express Mail Label No. EV 355386304 US

### APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1.  Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original, and a duplicate for fee processing)
2.  Applicant claims small entity status.  
See 37 CFR 1.27.
3.  Specification [Total Pages 157]  
(preferred arrangement set forth below)
  - Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table, or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4.  Drawing(s) (35 U.S.C. 113) [Total Sheets 62]
5. Oath or Declaration [Total Sheets 2]
  - a.  Newly executed (original or copy)
  - b.  Copy from a prior application (37 CFR 1.63(d))  
(for continuation/divisional with Box 18 completed)
    - i.  DELETION OF INVENTOR(S)  
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6.  Application Data Sheet. See 37 CFR 1.76

MS Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

7.  CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8.  Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
  - a.  Computer Readable Form (CRF)
  - b. Specification Sequence Listing on:
    - i.  CD-ROM or CD-R (2 copies); or
    - ii.  Paper
  - c.  Statements verifying identity of above copies

### ACCOMPANYING APPLICATIONS PARTS

9.  Assignment Papers (cover sheet & document(s))
10.  37 CFR 3.73(b) Statement (when there is an assignee)  Power of Attorney
11.  English Translation Document (if applicable)
12.  Information Disclosure Statement (IDS)/PTO-1449  Copies of IDS Citations
13.  Preliminary Amendment
14.  Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
15.  Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16.  Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i).  
Applicant must attach form PTO/SB/35 or its equivalent.
17.  Other: Copy of prior Revocation of Power of Atty;  
Request To Use Identical Computer Readable Form From Another Application (2 pages)

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the specification following the title, or in an Application Data Sheet under 37 CFR 1.76:

Continuation  Divisional  Continuation-in-part (CIP) of prior application No. 09/513575

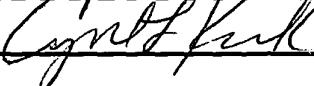
Prior application information: Examiner R. Shukla Art Unit: 1632

For CONTINUATION or DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

### 19. CORRESPONDENCE ADDRESS

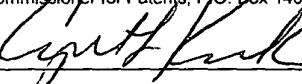
<input checked="" type="checkbox"/> Customer Number:	00959		OR	<input checked="" type="checkbox"/> Correspondence address below
Name	LAHIVE & COCKFIELD, LLP Cynthia L. Kanik, Ph.D.			
Address	28 State Street			
City	Boston	State	MA	Zip Code
Country	US	Telephone	(617) 227-7400	Fax

Name (Print/Type) Cynthia L. Kanik, Ph.D. Registration No. (Attorney/Agent) 37,320

Signature  Date August 5, 2003

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV 355386304 US, in an envelope addressed to: MS Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

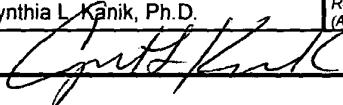
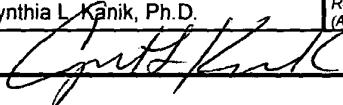
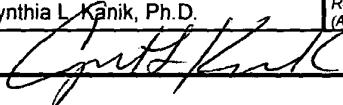
Dated: August 5, 2003

Signature:  (Cynthia L. Kanik, Ph.D.)

22151 U.S. PRO  
10/635818

08/05/03

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>FEE TRANSMITTAL for FY 2003</b>		<b>Complete if Known</b>																																																																																																																																																																																																																																																																																																										
		Application Number		Not Yet Assigned																																																																																																																																																																																																																																																																																																								
		Filing Date		Concurrently Herewith																																																																																																																																																																																																																																																																																																								
		First Named Inventor		John J. Harrington																																																																																																																																																																																																																																																																																																								
		Examiner Name		R. Shukla																																																																																																																																																																																																																																																																																																								
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27		Art Unit		1632																																																																																																																																																																																																																																																																																																								
<b>TOTAL AMOUNT OF PAYMENT</b> (\$ ) 375.00		Attorney Docket No.		ATX-007CP4DV13CN																																																																																																																																																																																																																																																																																																								
<b>METHOD OF PAYMENT (check all that apply)</b>																																																																																																																																																																																																																																																																																																												
<input type="checkbox"/> Check <input type="checkbox"/> Credit Card <input type="checkbox"/> Money Order <input type="checkbox"/> Other <input type="checkbox"/> None <input checked="" type="checkbox"/> Deposit Account Deposit Account Number      12-0080 Deposit Account Name      Lahive & Cockfield, LLP The Director is hereby authorized to: (check all that apply) <input checked="" type="checkbox"/> Charge fee(s) indicated below <input type="checkbox"/> Credit any overpayments <input checked="" type="checkbox"/> Charge any additional fee(s) during the pendency of this application <input type="checkbox"/> Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.																																																																																																																																																																																																																																																																																																												
<b>FEE CALCULATION (continued)</b>																																																																																																																																																																																																																																																																																																												
<b>3. ADDITIONAL FEES</b>																																																																																																																																																																																																																																																																																																												
<table border="1"> <thead> <tr> <th>Large Entity</th> <th>Small Entity</th> <th colspan="4">Fee Description</th> <th>Fee Paid</th> </tr> <tr> <th>Fee Code</th> <th>Fee (\$)</th> <th>Fee Code</th> <th>Fee (\$)</th> <th colspan="3"></th> <th></th> </tr> </thead> <tbody> <tr><td>1051</td><td>130</td><td>2051</td><td>65</td><td colspan="3">Surcharge - late filing fee or oath</td><td></td></tr> <tr><td>1052</td><td>50</td><td>2052</td><td>25</td><td colspan="3">Surcharge - late provisional filing fee or cover sheet</td><td></td></tr> <tr><td>1053</td><td>130</td><td>1053</td><td>130</td><td colspan="3">Non-English specification</td><td></td></tr> <tr><td>1812</td><td>2,520</td><td>1812</td><td>2,520</td><td colspan="3">For filing a request for ex parte reexamination</td><td></td></tr> <tr><td>1804</td><td>920*</td><td>1804</td><td>920*</td><td colspan="3">Requesting publication of SIR prior to Examiner action</td><td></td></tr> <tr><td>1805</td><td>1,840*</td><td>1805</td><td>1,840*</td><td colspan="3">Requesting publication of SIR after Examiner action</td><td></td></tr> <tr><td>1251</td><td>110</td><td>2251</td><td>55</td><td colspan="3">Extension for reply within first month</td><td></td></tr> <tr><td>1252</td><td>410</td><td>2252</td><td>205</td><td colspan="3">Extension for reply within second month</td><td></td></tr> <tr><td>1253</td><td>930</td><td>2253</td><td>465</td><td colspan="3">Extension for reply within third month</td><td></td></tr> <tr><td>1254</td><td>1,450</td><td>2254</td><td>725</td><td colspan="3">Extension for reply within fourth month</td><td></td></tr> <tr><td>1255</td><td>1,970</td><td>2255</td><td>985</td><td colspan="3">Extension for reply within fifth month</td><td></td></tr> <tr><td>1401</td><td>320</td><td>2401</td><td>160</td><td colspan="3">Notice of Appeal</td><td></td></tr> <tr><td>1402</td><td>320</td><td>2402</td><td>160</td><td colspan="3">Filing a brief in support of an appeal</td><td></td></tr> <tr><td>1403</td><td>280</td><td>2403</td><td>140</td><td colspan="3">Request for oral hearing</td><td></td></tr> <tr><td>1451</td><td>1,510</td><td>1451</td><td>1,510</td><td colspan="3">Petition to institute a public use proceeding</td><td></td></tr> <tr><td>1452</td><td>110</td><td>2452</td><td>55</td><td colspan="3">Petition to revive - unavoidable</td><td></td></tr> <tr><td>1453</td><td>1,300</td><td>2453</td><td>650</td><td colspan="3">Petition to revive - unintentional</td><td></td></tr> <tr><td>1501</td><td>1,300</td><td>2501</td><td>650</td><td colspan="3">Utility issue fee (or reissue)</td><td></td></tr> <tr><td>1502</td><td>470</td><td>2502</td><td>235</td><td colspan="3">Design issue fee</td><td></td></tr> <tr><td>1503</td><td>630</td><td>2503</td><td>315</td><td colspan="3">Plant issue fee</td><td></td></tr> <tr><td>1460</td><td>130</td><td>1460</td><td>130</td><td colspan="3">Petitions to the Commissioner</td><td></td></tr> <tr><td>1807</td><td>50</td><td>1807</td><td>50</td><td colspan="3">Processing fee under 37 CFR 1.17(q)</td><td></td></tr> <tr><td>1806</td><td>180</td><td>1806</td><td>180</td><td colspan="3">Submission of Information Disclosure Stmt</td><td></td></tr> <tr><td>8021</td><td>40</td><td>8021</td><td>40</td><td colspan="3">Recording each patent assignment per property (times number of properties)</td><td></td></tr> <tr><td>1809</td><td>750</td><td>2809</td><td>375</td><td colspan="3">Filing a submission after final rejection (37 CFR 1.129(a))</td><td></td></tr> <tr><td>1810</td><td>750</td><td>2810</td><td>375</td><td colspan="3">For each additional invention to be examined (37CFR 1.129(b))</td><td></td></tr> <tr><td>1801</td><td>750</td><td>2801</td><td>375</td><td colspan="3">Request for Continued Examination (RCE)</td><td></td></tr> <tr><td>1802</td><td>900</td><td>1802</td><td>900</td><td colspan="3">Request for expedited examination of a design application</td><td></td></tr> <tr> <td colspan="6">Other fee (specify)</td> <td colspan="2">SUBTOTAL (3) (\$ ) 0.00</td> </tr> <tr> <td colspan="6">*Reduced by Basic Filing Fee Paid</td> <td colspan="2">SUBTOTAL (3) (\$ ) 0.00</td> </tr> <tr> <td colspan="6">**or number previously paid, if greater. For Reissues, see above</td> <td colspan="2"></td> </tr> <tr> <td colspan="6"></td> <td colspan="2" style="text-align: center;">Complete (if applicable)</td> </tr> <tr> <td colspan="2">SUBMITTED BY</td> <td colspan="4"></td> <td colspan="2"></td> </tr> <tr> <td>Name (Print/Type)</td> <td colspan="2">Cynthia L. Kanik, Ph.D.</td> <td>Registration No. (Attorney/Agent)</td> <td>37,320</td> <td>Telephone</td> <td colspan="2">(617) 227-7400</td> </tr> <tr> <td>Signature</td> <td colspan="4"></td> <td>Date</td> <td colspan="2">August 5, 2003</td> </tr> </tbody></table>						Large Entity	Small Entity	Fee Description				Fee Paid	Fee Code	Fee (\$)	Fee Code	Fee (\$)					1051	130	2051	65	Surcharge - late filing fee or oath				1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet				1053	130	1053	130	Non-English specification				1812	2,520	1812	2,520	For filing a request for ex parte reexamination				1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action				1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action				1251	110	2251	55	Extension for reply within first month				1252	410	2252	205	Extension for reply within second month				1253	930	2253	465	Extension for reply within third month				1254	1,450	2254	725	Extension for reply within fourth month				1255	1,970	2255	985	Extension for reply within fifth month				1401	320	2401	160	Notice of Appeal				1402	320	2402	160	Filing a brief in support of an appeal				1403	280	2403	140	Request for oral hearing				1451	1,510	1451	1,510	Petition to institute a public use proceeding				1452	110	2452	55	Petition to revive - unavoidable				1453	1,300	2453	650	Petition to revive - unintentional				1501	1,300	2501	650	Utility issue fee (or reissue)				1502	470	2502	235	Design issue fee				1503	630	2503	315	Plant issue fee				1460	130	1460	130	Petitions to the Commissioner				1807	50	1807	50	Processing fee under 37 CFR 1.17(q)				1806	180	1806	180	Submission of Information Disclosure Stmt				8021	40	8021	40	Recording each patent assignment per property (times number of properties)				1809	750	2809	375	Filing a submission after final rejection (37 CFR 1.129(a))				1810	750	2810	375	For each additional invention to be examined (37CFR 1.129(b))				1801	750	2801	375	Request for Continued Examination (RCE)				1802	900	1802	900	Request for expedited examination of a design application				Other fee (specify)						SUBTOTAL (3) (\$ ) 0.00		*Reduced by Basic Filing Fee Paid						SUBTOTAL (3) (\$ ) 0.00		**or number previously paid, if greater. For Reissues, see above														Complete (if applicable)		SUBMITTED BY								Name (Print/Type)	Cynthia L. Kanik, Ph.D.		Registration No. (Attorney/Agent)	37,320	Telephone	(617) 227-7400		Signature					Date	August 5, 2003	
Large Entity	Small Entity	Fee Description				Fee Paid																																																																																																																																																																																																																																																																																																						
Fee Code	Fee (\$)	Fee Code	Fee (\$)																																																																																																																																																																																																																																																																																																									
1051	130	2051	65	Surcharge - late filing fee or oath																																																																																																																																																																																																																																																																																																								
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet																																																																																																																																																																																																																																																																																																								
1053	130	1053	130	Non-English specification																																																																																																																																																																																																																																																																																																								
1812	2,520	1812	2,520	For filing a request for ex parte reexamination																																																																																																																																																																																																																																																																																																								
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action																																																																																																																																																																																																																																																																																																								
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action																																																																																																																																																																																																																																																																																																								
1251	110	2251	55	Extension for reply within first month																																																																																																																																																																																																																																																																																																								
1252	410	2252	205	Extension for reply within second month																																																																																																																																																																																																																																																																																																								
1253	930	2253	465	Extension for reply within third month																																																																																																																																																																																																																																																																																																								
1254	1,450	2254	725	Extension for reply within fourth month																																																																																																																																																																																																																																																																																																								
1255	1,970	2255	985	Extension for reply within fifth month																																																																																																																																																																																																																																																																																																								
1401	320	2401	160	Notice of Appeal																																																																																																																																																																																																																																																																																																								
1402	320	2402	160	Filing a brief in support of an appeal																																																																																																																																																																																																																																																																																																								
1403	280	2403	140	Request for oral hearing																																																																																																																																																																																																																																																																																																								
1451	1,510	1451	1,510	Petition to institute a public use proceeding																																																																																																																																																																																																																																																																																																								
1452	110	2452	55	Petition to revive - unavoidable																																																																																																																																																																																																																																																																																																								
1453	1,300	2453	650	Petition to revive - unintentional																																																																																																																																																																																																																																																																																																								
1501	1,300	2501	650	Utility issue fee (or reissue)																																																																																																																																																																																																																																																																																																								
1502	470	2502	235	Design issue fee																																																																																																																																																																																																																																																																																																								
1503	630	2503	315	Plant issue fee																																																																																																																																																																																																																																																																																																								
1460	130	1460	130	Petitions to the Commissioner																																																																																																																																																																																																																																																																																																								
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)																																																																																																																																																																																																																																																																																																								
1806	180	1806	180	Submission of Information Disclosure Stmt																																																																																																																																																																																																																																																																																																								
8021	40	8021	40	Recording each patent assignment per property (times number of properties)																																																																																																																																																																																																																																																																																																								
1809	750	2809	375	Filing a submission after final rejection (37 CFR 1.129(a))																																																																																																																																																																																																																																																																																																								
1810	750	2810	375	For each additional invention to be examined (37CFR 1.129(b))																																																																																																																																																																																																																																																																																																								
1801	750	2801	375	Request for Continued Examination (RCE)																																																																																																																																																																																																																																																																																																								
1802	900	1802	900	Request for expedited examination of a design application																																																																																																																																																																																																																																																																																																								
Other fee (specify)						SUBTOTAL (3) (\$ ) 0.00																																																																																																																																																																																																																																																																																																						
*Reduced by Basic Filing Fee Paid						SUBTOTAL (3) (\$ ) 0.00																																																																																																																																																																																																																																																																																																						
**or number previously paid, if greater. For Reissues, see above																																																																																																																																																																																																																																																																																																												
						Complete (if applicable)																																																																																																																																																																																																																																																																																																						
SUBMITTED BY																																																																																																																																																																																																																																																																																																												
Name (Print/Type)	Cynthia L. Kanik, Ph.D.		Registration No. (Attorney/Agent)	37,320	Telephone	(617) 227-7400																																																																																																																																																																																																																																																																																																						
Signature					Date	August 5, 2003																																																																																																																																																																																																																																																																																																						

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV 355386304 US, in an envelope addressed to: MS Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Dated: August 5, 2003

Signature: 

(Cynthia L. Kanik, Ph.D.)

Application No. (if known):

Attorney Docket No.: ATX-007CP4DV13CN

## Certificate of Express Mailing Under 37 CFR 1.10

I hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail, Airbill No. EV 355386304 US in an envelope addressed to:

MS Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

on August 5, 2003  
Date



Signature

Cynthia L. Kanik, Ph.D.  
Typed or printed name of person signing Certificate

Note: Each paper must have its own certificate of mailing, or this certificate must identify each submitted paper.

Specification (157 pages)  
37 drawings (62 sheets)

Specification Sequence Listing on paper (38 pages)  
Request to Use Identical Computer Readable Form (2 pages)  
Power of Attorney (2 pages)  
Copy of Prior Revocation of Power of Attorney (2 pages)  
Utility Patent Application Transmittal (1 page)

Application Data Sheet (3 pages)  
Fee Transmittal (1 page in duplicate)